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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,715

09/06/2006

Masatomo Mizuta

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EXAMINER

HAN, KWANG S

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

04/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,715	Applicant(s) MIZUTA, MASATOMO	
	Examiner Kwang Han	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/6/06</u> . | 6) <input type="checkbox"/> Other: ____. |

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**FILM COVERED ELECTRIC DEVICE AND COLLECTOR COVERING MEMBER FOR
THE FILM COVERED ELECTRIC DEVICE**

Examiner: K. Han SN: 10/591,715 Art Unit: 1795 April 1, 2009

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: On page 14, Line 12 of the specification recites "Collector protection member 10 is 100um in thickens".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneda et al. (WO00/59063 using US 6743546 for translation and citation) in view of Yagata et al. (JP 2005-142028, machine translation).

Regarding claims 1 and 6, Kaneda is directed towards a laminate sheath type battery with an electrode plate module (3) including sheet like plates of positive and negative electrodes laminated upon one another having a laminate casing (1) which is comprised of a metal layer and a heat seal resin layer (12:14-56, 1:50-62). Terminals (collectors 10a; Figures 1, 4, 12) are formed from collectively joining the anode and cathode plates and the casing sealed (13:27-44). Kaneda further teaches an insulating spacer (59; Figure 12) surrounding the terminals which is used to hold the electrode assembly in position and restrict from moving due to vibration or impact (17:6-31) but is silent towards the spacer tightly covering at least a corner of the collector.

Yagata teaches a stacked laminate battery [Abstract, 0001] which uses protective films (56, 57) to cover and protect the terminal areas (40, 41) of the collector region (Drawings 2 and 3) during thermal melt [0032]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a protective film on the terminal of the battery of Kaneda because Yagata teaches it provides protection to the terminal areas of the battery from thermal melt during sealing. The courts have held that the configuration of the claimed protective film was a matter of choice which a

person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the protective film was significant. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Regarding claims 2 and 7, Kaneda discloses a lead (tab, 14) connected to the terminal that extends from the laminate casing (Figure 12).

Yagata teaches an opening on one end of the protective film to allow for the lead to extend outside the laminate battery to form an electrical connection (Drawing 2). It would have been obvious to one of ordinary skill in the art at the time of the invention for the protective film to have an opening for the terminal because Yagata shows the opening is required to allow for the lead to extend outside of the battery structure to form an electrical connection as is well known.

Regarding claims 3 and 8, Kaneda discloses the insulating spacer surrounding the terminal region to be made of a resin (17:6-13).

Yagata teaches the preferred material to be layered to the lead is resin because it is usable in conjunction with acid modified polymers [0051]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a resin film as the protective layer in the battery of Kaneda because Yagata teaches a resin film can be used in conjunction with acid modified polymers which are typically present in electrochemical devices.

Regarding claims 4 and 9, the teachings of Kaneda and Yagata as discussed above are herein incorporated. Kaneda discloses a casing consisting of laminate sheet which is heat sealed in the shape of a "bag" to form a sealed battery with air-tight and

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liquid-tight properties (1:50-62). It would have been obvious to one of ordinary skill in the art at the time of the invention to also adhere the protective films of Kaneda modified by Yagata because Kaneda teaches sheets that have been heat sealed in the shape of an envelope provide air-tight and liquid-tight properties which are required for the sealed regions around the external leads of a battery.

6. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneda et al. in view of Yagata et al. as applied to claims 1 and 6 above, and further in view of Kamata et al. (US 4732825).

Regarding claims 5 and 10, the teachings of Kaneda and Yagata as discussed above are herein incorporated. Kaneda and Yagata are silent as to the member being made of an inflation film.

Kamata teaches a flat cell with a pair of sealing films which are produced by the inflation method so that the film is isotropic in terms of thermal shrinkage and thermal expansion when it is heated and cooled (5:56-6:9). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the protective film be an inflation film because Kamata teaches this provides the film with isotropic properties so that the film shrinks and expands due to heat evenly.

Contact/Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang Han whose telephone number is (571) 270-

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5264. The examiner can normally be reached on Monday through Friday 8:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. H./
Examiner, Art Unit 1795

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795